Hi Year 6,

My name is Kitty and I’m a 23-year-old electronics and electrical engineer. I went to school in Leeds, University in Nottingham and now work in Newtown in Wales. I’m writing to you to tell you about my job as an engineer, what other engineers do and how that all relates to space.

When I first started out on my STEM career, I had no clue what an engineer was so I’ll give a go at explaining what an engineer is first and get on to what I specifically do after. An engineer is someone who designs, build, or maintains machines and structures. For example, imagine a man called Bob, and how he starts his day: a civil engineer made sure the skyscraper Bob woke up in, a chemical engineer made toothpaste Bob brushes his teeth with, a mechanical engineer designed the car he drives to work, an electrical engineer designed the wind farm that made the energy to boil Bob’s cup of tea when he got there and an electronics engineer designed the kettle. The chances are that anything you used to do ANYTHING today was designed by an engineer.

I am an electronics and electrical engineer. Electronics engineers design things like mobile phones, laptops, smart boards and computers, things safe to hold and use every day. Basically, anything with small amounts of electricity going through it. An electrical engineer designs things that have massive, powerful amounts of electricity in them like power stations, factory systems and makes sure the electricity gets safely into your homes. I do a combination of both. I work in a team that designs a machine that spins motors in exactly the right way so that lifts can be used safely, conveyor belts in factories work and giant cruise ships can steer. In my day I am either working on my computer, simulating, researching, or designing circuits or I am testing my circuits in the lab. I work with large amounts of electricity which means that when I do something a bit wrong it usually ends in a BANG! I think that’s one of the most fun things about my work that even when things go badly you at least get the fun of having blown something up. When all goes to plan, I get to make something practical and useful that helps people in their everyday lives.

Space exploration is headed by engineers and scientists like Areospace engineers such as Neil Armstrong (Yes, the first man on the moon was an engineer) but also by electrical and electronics engineers who design the instruments and power systems that mean useful information can be collected that helps us here on earth. In fact, there’s a whole special name for electronics engineers who work on space projects. They’re called “Astrionic Engineers”. One of my favorite things that has come from space exploration is the selfie camera. The camera now used in all smart phones (complementary metal oxide semiconductor) was developed by electronics engineers at NASA to be smaller, lighter and clearer than existing cameras.

I hope this has cleared up bit what an engineer is, what they do all day. If you have any more questions I would love to hear back from you. Happy space week.

From Kitty 😊